

Global Aviation Monitor (GAM)

Analysis and Short Term
Outlook of Global, European
and German Air Transport

March 2016



Main Results of Global Air Transport Supply Analysis and Outlook

Background:

- Covers about 3,500 airports worldwide
- Covers about 850 airlines worldwide
- Air transport supply of 2015: More than 34 M flights (non-stop) worldwide, new record value
- Busiest month 2015: July with 3.08 M flights
- Air traffic increases slowly since April 2013
- Forecasting methodology: Time series analysis

Analysis: April 2015 – March 2016

Global

- March 2016: 2.9 M flights supplied (+2.9%)
- About 5% growth per year before financial crisis 2008/2009, then a rapid decline of more than 9% between February 2008 and February 2009, followed by a rather slow recovery until 2011 (7.2% increase between February 2009 and February 2011). Since 2011, the number of flights grows only very slowly; stagnation between September 2012 and March 2013, small growth rates since April 2013; growth rates of around 3% since March 2015, of around 3.5% - 4.0% between November 2015 and February 2016
- Airports: Heterogeneous development of no. of flights offered; strong growth e.g. at Istanbul Ataturk (+6.4%)
- Airlines: Heterogeneous development of no. of flights offered; strong growth e.g. of Ryanair, Lion Air and IndiGo; American Airlines merger with US Airways

World Regions, Europe

- Overall small increase since April 2013; in Europe, small traffic increase since July 2013; in Asia continued growth; no growth in North America
- Airports: Heterogeneous developments of no. of flights offered; strong increase at Istanbul Sabiha Gokcen, Barcelona and Dublin however decline at some airports, e.g. Moscow Domodedovo
- Airlines: Heterogeneous developments of flights, some airlines, e.g. Ryanair Airlines with strong growth, some growth in the low cost segment, e.g. Wizz, Ryanair and easyjet; new: Eurowings (former Lufthansa and germanwings flights in Germany and Europe are now operated by Eurowings except at Frankfurt and Munich; long-haul low cost flights from Cologne), some airlines, e.g. Air Berlin and Air France with decrease

Germany

- Airports: Some bigger airports, e.g. Cologne, Stuttgart, and some small airports e.g. Karlsruhe, with traffic growth; strong growth at Berlin Schoenefeld because of strong growth of Ryanair; some German airports with downward trend, e.g. Leipzig and Bremen
- Airlines: Heterogeneous developments of number of flights offered; strong growth of e.g. Ryanair, Germania and Wizz; some airlines, e.g. Air Berlin with decreasing traffic

Outlook: April 2016 – June 2016

Global

- For the next few months, a small traffic growth of 3-4% is expected

World Regions, Europe

- For the next few months, a small traffic growth of 3-4% is expected

Germany

- For the next few month, a small traffic growth of 0-2% is expected

Rank	Airport	03/2016	Growth rate
1	Atlanta Hartsfield-Jackson Intl	37.683	1,3
2	Chicago O'Hare International	35.724	-2,8
3	Dallas/Fort Worth Intl	27.797	-3,2
4	Los Angeles International	25.708	1,2
5	Beijing Capital	25.275	1,6
6	Denver Intl	22.952	1,0
7	Charlotte	22.235	0,8
8	London Heathrow	19.766	-0,4
9	Houston George Bush Intercontinental	19.436	-5,9
10	Shanghai Pudong International	19.296	2,5
11	Tokyo Haneda	18.929	3,2
12	Istanbul Ataturk	18.896	6,4
13	Jakarta Soekarno-Hatta	18.722	4,0
14	Frankfurt International	18.245	-1,6
15	New York J F Kennedy International	18.233	4,8
16	Amsterdam	18.148	4,8
17	Paris Charles de Gaulle	17.919	1,1
18	Phoenix Sky Harbor Intl .	17.530	-0,1
19	Guangzhou	17.480	0,1
20	Toronto Lester B Pearson Intl	17.428	1,3
21	Dubai	17.152	4,5
22	San Francisco International	17.073	3,5
23	Hong Kong International	16.945	2,1
24	Mexico City Juarez International	16.823	2,7
25	Newark Liberty International	16.760	0,6

Tab. 1: Number of monthly Take-offs at the biggest Airports in the World

Rank	Airport	03/2016	Growth rate
1	Frankfurt International	18.245	-1,6
2	Munich International	14.736	-2,2
3	Dusseldorf International	7.664	-3,2
4	Berlin Tegel	7.436	2,5
5	Hamburg	5.586	-4,0
6	Stuttgart	3.784	4,4
7	Cologne/Bonn K.A.	3.481	8,6
8	Berlin Schoenefeld	3.092	40,0
9	Hanover	1.958	-1,7
10	Nuremberg	1.388	-5,9
11	Bremen	946	-6,6
12	Leipzig/Halle	762	-9,7
13	Dresden	759	-11,2
14	Frankfurt Hahn	654	0,2
15	Dortmund	518	0,6
16	Dusseldorf Niederrhein	356	-6,1
17	Munster	331	2,5
18	Friedrichshafen	317	-4,5
19	Karlsruhe/Baden Baden	314	21,2
20	Saarbrücken Ensheim	234	-11,4
21	Memmingen	224	-7,4
22	Paderborn	170	-19,0
23	Mannheim	84	6,3
24	Rostock-Laage	51	13,3
25	Westerland	50	51,5

Tab. 3: Number of monthly Take-offs at the biggest Airports in Germany

Rank	Airport	03/2016	Growth rate
1	London Heathrow	19.766	-0,4
2	Istanbul Ataturk	18.896	6,4
3	Frankfurt International	18.245	-1,6
4	Amsterdam	18.148	4,8
5	Paris Charles de Gaulle	17.919	1,1
6	Madrid Barajas	14.778	4,5
7	Munich International	14.736	-2,2
8	Rome Fiumicino	11.921	-1,8
9	Barcelona	11.346	10,2
10	Moscow Sheremetyevo International	10.455	4,3
11	Copenhagen	10.359	4,0
12	London Gatwick	10.228	5,7
13	Paris Orly	9.528	-0,6
14	Zurich	9.400	1,9
15	Oslo	9.269	-1,8
16	Stockholm Arlanda	8.975	-2,0
17	Vienna	8.863	-1,9
18	Istanbul Sabiha Gokcen	8.701	21,8
19	Brussels	8.557	3,2
20	Dublin	7.843	12,7
21	Dusseldorf International	7.664	-3,2
22	Moscow Domodedovo	7.624	-12,7
23	Berlin Tegel	7.436	2,5
24	Geneva	6.740	3,2
25	Helsinki	6.608	-0,1

Tab. 2: Number of monthly Take-offs on the biggest Airports in Europe

Rank	Airline	03/2016	Growth rate
1	American Airlines	200.493	84,0
2	Delta Air Lines	163.314	1,9
3	United Airlines	140.907	-5,4
4	Southwest Airlines	114.173	3,1
5	China Southern Airlines	59.047	-1,2
6	China Eastern Airlines	55.515	6,6
7	Ryanair	48.928	24,2
8	Air Canada	47.770	-1,8
9	Lufthansa German Airlines	41.303	-4,4
10	easyJet	38.484	6,0
11	Turkish Airlines	38.136	6,4
12	Air China	37.876	5,0
13	All Nippon Airways	31.120	-5,0
14	British Airways	30.851	1,4
15	Lion Air	30.293	46,6
16	Alaska Airlines	30.170	5,0
17	JetBlue Airways Corporation	28.658	6,7
18	Air France	28.252	-5,2
19	SAS Scandinavian Airlines	25.252	-5,3
20	Qantas Airways	23.767	-0,3
21	Aeroflot Russian Airlines	23.641	-0,4
22	Japan Airlines International	23.044	1,0
23	AVIANCA	22.591	-1,1
24	IndiGo Air	22.186	23,8
25	Gol Transportes Aereos	21.966	-17,9

Tab. 4: Number of monthly Take-offs by the biggest Airlines in the World

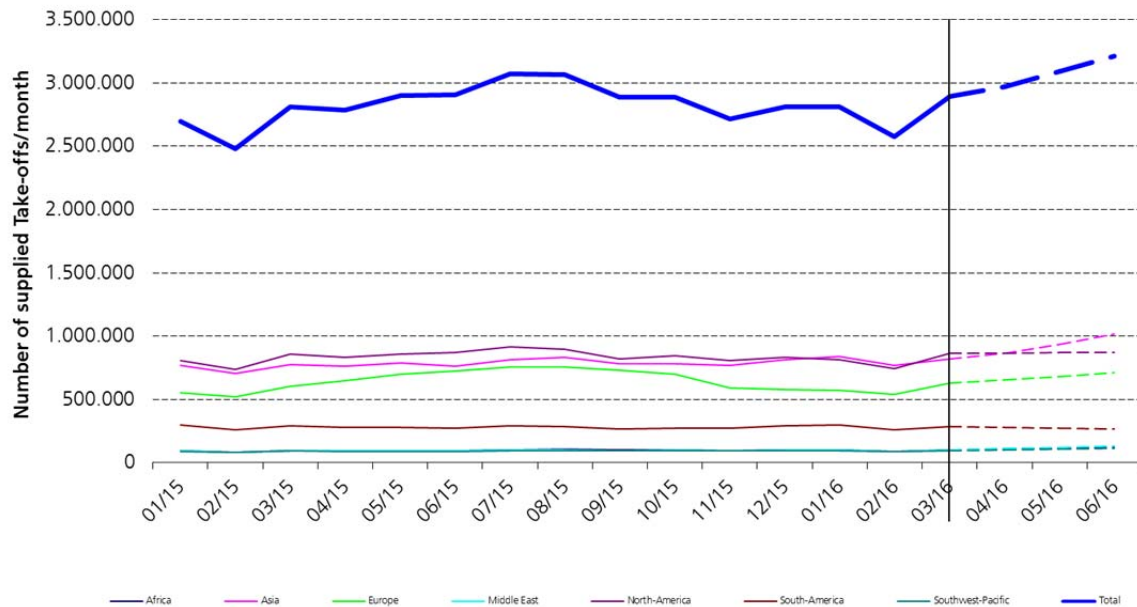
Rank	Airline	03/2016	Growth rate
1	Lufthansa German Airlines	25.042	-4,5
2	Air Berlin	9.502	-6,6
3	germanwings	6.405	-25,3
4	Ryanair	3.122	70,9
5	Eurowings	2.138	---
6	easyJet	2.123	1,2
7	Turkish Airlines	1.366	14,3
8	British Airways	1.348	-3,7
9	KLM-Royal Dutch Airlines	1.243	-4,3
10	Air France	1.178	-0,4
11	Condor Flugdienst	1.096	3,8
12	Austrian Airlines AG	1.053	22,2
13	SAS Scandinavian Airlines	1.039	-15,3
14	Swiss	1.019	2,1
15	TUIfly	764	13,5
16	Aeroflot Russian Airlines	737	-1,3
17	Wizz Air	631	40,5
18	SunExpress	569	24,5
19	Germania	541	35,3
20	Air Dolomiti	440	-25,7
21	Flybe	422	5,8
22	Alitalia	416	18,9
23	Pegasus Airlines	384	18,9
24	Iberia	382	10,7
25	British Midland Regional	375	49,4

Tab. 6: Number of monthly Take-offs by the biggest Airlines in Germany from German airports

Rank	Airline	03/2016	Growth rate
1	Ryanair	48.243	24,5
2	easyJet	37.916	6,5
3	Lufthansa German Airlines	37.670	-4,5
4	Turkish Airlines	32.952	6,8
5	British Airways	25.438	1,7
6	SAS Scandinavian Airlines	24.879	-5,6
7	Air France	24.824	-5,7
8	Aeroflot Russian Airlines	19.841	-1,3
9	KLM-Royal Dutch Airlines	16.656	1,1
10	Alitalia	15.756	1,9
11	Iberia	15.338	3,9
12	Flybe	14.846	-3,3
13	Air Berlin	14.075	-5,1
14	Vueling Airlines	12.377	14,7
15	Pegasus Airlines	12.330	19,3
16	Swiss	11.341	3,7
17	Wideroe's Flyveselskap	10.459	-10,8
18	Wizz Air	10.415	22,2
19	Norwegian Air Shuttle	10.309	-25,3
20	Austrian Airlines AG	9.190	2,3
21	germanwings	9.151	-29,4
22	Finnair	9.025	9,4
23	TAP Air Portugal	8.010	-2,8
24	Aer Lingus	7.717	8,8
25	HOP!	7.551	1,4

Tab. 5: Number of monthly Take-offs by the biggest Airlines in Europe from European airports

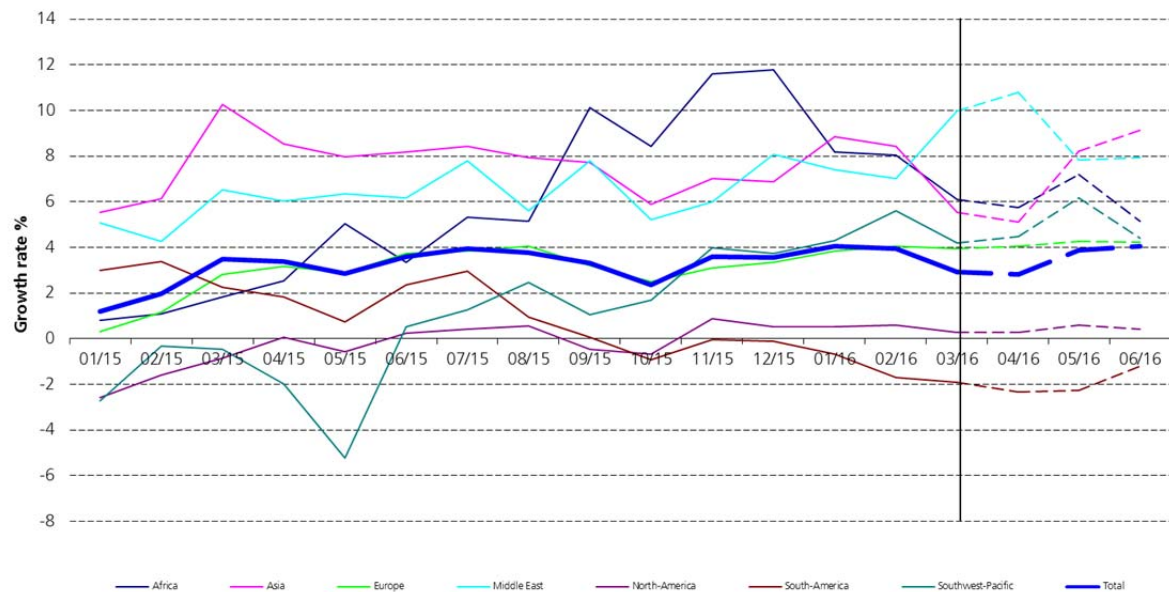
Development of the Global Air Transport Supply



Source: OAG 2014/2016, DLR 2014/2016

Fig. 1: Development of the Global Air Transport Supply

Changes in the Global Air Transport Supply



Source: OAG 2014/2016, DLR 2014/2016

Fig. 2: Changes in the Global Air Transport Supply

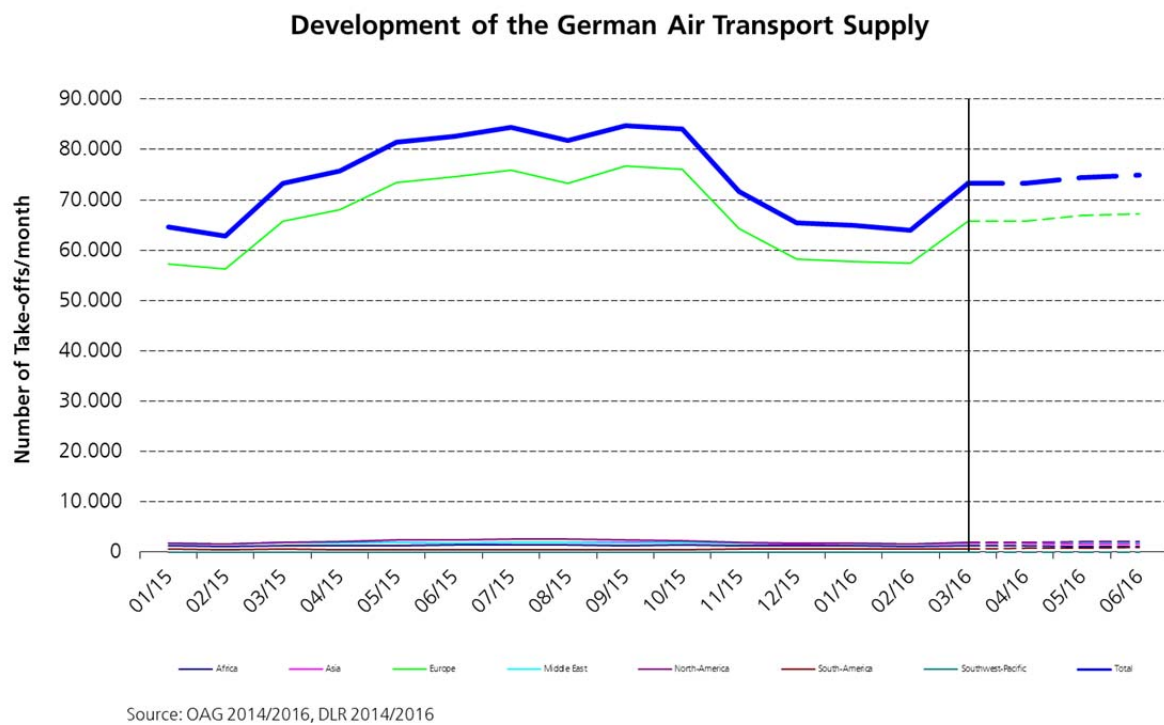


Fig. 3: Development of the German Air Transport Supply

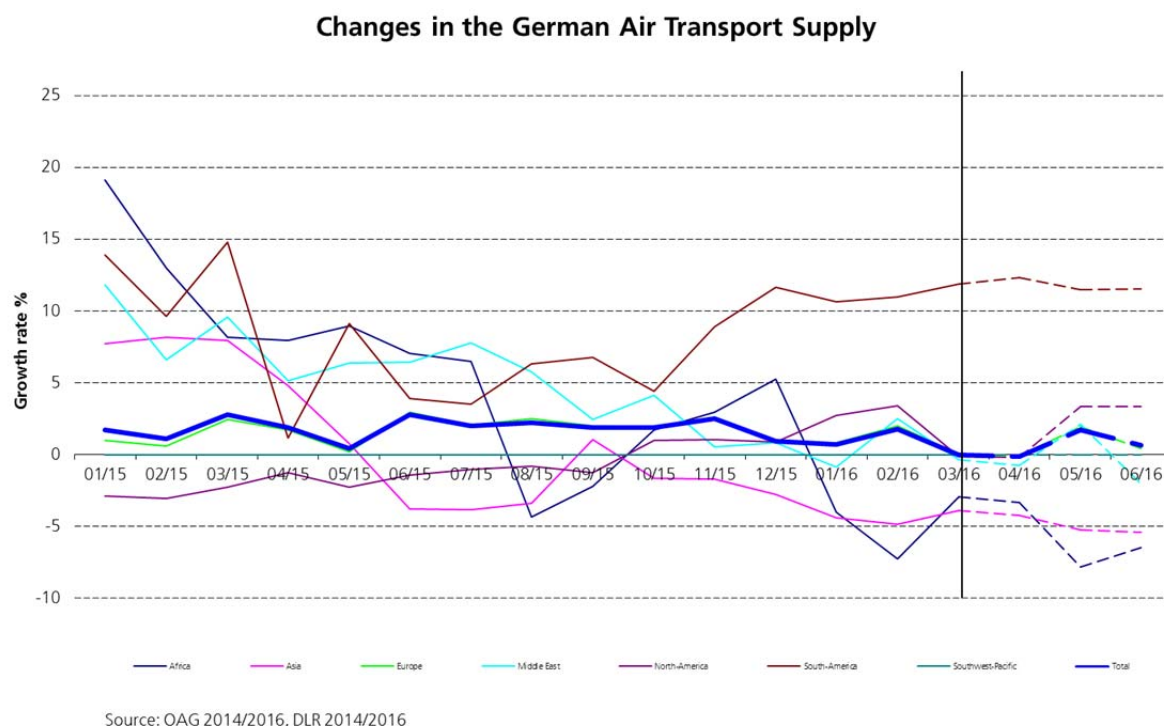


Fig. 4: Changes in the German Air Transport Supply

Authors:

Dr. Peter Berster
DLR
Flughafenwesen und Luftverkehr
D-51147 Köln
E-Mail: peter.berster@dlr.de

Dr. Marc Gelhausen
DLR
Flughafenwesen und Luftverkehr
D-51147 Köln
E-Mail: marc.gelhausen@dlr.de

Holger Pabst
DLR
Flughafenwesen und Luftverkehr
D-51147 Köln
E-Mail: holger.pabst@dlr.de

Dieter Wilken
DLR
Flughafenwesen und Luftverkehr
D-51147 Köln
E-Mail: dieter.wilken@dlr.de